

SEQUENCE LISTING

<110> Evotec NeuroSciences GmbH

<120> Diagnostic and therapeutic use of Vault polynucleotides
and proteins for neurodegenerative diseases.

<130> 030833wo ME/BM

<140> PCT/EP03/03626

<141> 2002-04-08

<150> 02007820.0

<151> 2002-04-08

<150> US 60/370,214

<151> 2002-04-08

<160> 14

<170> PatentIn Ver. 2.1

<210> 1

<211> 35

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: ADPRTL1 cDNA
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<211> 1724

<212> PRT

<213> Homo sapiens

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20 25 30Asn Gly Gly Lys Phe Ser Phe Ser Leu Asn Pro Gln Cys Thr His Ile
35 40 45Ile Leu Asp Asn Ala Asp Val Leu Ser Gln Tyr Gln Leu Asn Ser Ile
50 55 60Gln Lys Asn His Val His Ile Ala Asn Pro Asp Phe Ile Trp Lys Ser
65 70 75 80Ile Arg Glu Lys Arg Leu Leu Asp Val Lys Asn Tyr Asp Pro Tyr Lys
85 90 95Pro Leu Asp Ile Thr Pro Pro Pro Asp Gln Lys Ala Ser Ser Ser Glu
100 105 110

Val Lys Thr Glu Gly Leu Cys Pro Asp Ser Ala Thr Glu Glu Glu Asp
115 120 125

Thr Val Glu Leu Thr Glu Phe Gly Met Gln Asn Val Glu Ile Pro His
130 135 140

Leu Pro Gln Asp Phe Glu Val Ala Lys Tyr Asn Thr Leu Glu Lys Val
145 150 155 160

Gly Met Glu Gly Gly Gln Glu Ala Val Val Val Glu Leu Gln Cys Ser
165 170 175

Arg Asp Ser Arg Asp Cys Pro Phe Leu Ile Ser Ser His Phe Leu Leu
180 185 190

Asp Asp Gly Met Glu Thr Arg Arg Gln Phe Ala Ile Lys Lys Thr Ser
195 200 205

Glu Asp Ala Ser Glu Tyr Phe Glu Asn Tyr Ile Glu Glu Leu Lys Lys
210 215 220

Gln Gly Phe Leu Leu Arg Glu His Phe Thr Pro Glu Ala Thr Gln Leu
225 230 235 240

Ala Ser Glu Gln Leu Gln Ala Leu Leu Leu Glu Glu Val Met Asn Ser
245 250 255

Ser Thr Leu Ser Gln Glu Val Ser Asp Leu Val Glu Met Ile Trp Ala
260 265 270

Glu Ala Leu Gly His Leu Glu His Met Leu Leu Lys Pro Val Asn Arg
275 280 285

Ile Ser Leu Asn Asp Val Ser Lys Ala Glu Gly Ile Leu Leu Leu Val
290 295 300

Lys Ala Ala Leu Lys Asn Gly Glu Thr Ala Glu Gln Leu Gln Lys Met
305 310 315 320

Met Thr Glu Phe Tyr Arg Leu Ile Pro His Lys Gly Thr Met Pro Lys
325 330 335

Glu Val Asn Leu Gly Leu Leu Ala Lys Lys Ala Asp Leu Cys Gln Leu
340 345 350

Ile Arg Asp Met Val Asn Val Cys Glu Thr Asn Leu Ser Lys Pro Asn
355 360 365

Pro Pro Ser Leu Ala Lys Tyr Arg Ala Leu Arg Cys Lys Ile Glu His
370 375 380

Val Glu Gln Asn Thr Glu Glu Phe Leu Arg Val Arg Lys Glu Val Leu
385 390 395 400

Gln Asn His His Ser Lys Ser Pro Val Asp Val Leu Gln Ile Phe Arg
405 410 415

Val Gly Arg Val Asn Glu Thr Thr Glu Phe Leu Ser Lys Leu Gly Asn
420 425 430

Val Arg Pro Leu Leu His Gly Ser Pro Val Gln Asn Ile Val Gly Ile
435 440 445

Leu Cys Arg Gly Leu Leu Leu Pro Lys Val Val Glu Asp Arg Gly Val
 450 455 460
 Gln Arg Thr Asp Val Gly Asn Leu Gly Ser Gly Ile Tyr Phe Ser Asp
 465 470 475 480
 Ser Leu Ser Thr Ser Ile Lys Tyr Ser His Pro Gly Glu Thr Asp Gly
 485 490 495
 Thr Arg Leu Leu Leu Ile Cys Asp Val Ala Leu Gly Lys Cys Met Asp
 500 505 510
 Leu His Glu Lys Asp Phe Ser Leu Thr Glu Ala Pro Pro Gly Tyr Asp
 515 520 525
 Ser Val His Gly Val Ser Gln Thr Ala Ser Val Thr Thr Asp Phe Glu
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 Asp Asp Glu Phe Val Val Tyr Lys Thr Asn Gln Val Lys Met Lys Tyr
 545 550 555 560
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 565 570 575
 Ser Asp His Thr Glu Leu Glu Glu Tyr Arg Pro Glu Phe Ser Asn Phe
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 Ser Lys Val Glu Asp Tyr Gln Leu Pro Asp Ala Lys Thr Ser Ser Ser
 595 600 605
 Thr Lys Ala Gly Leu Gln Asp Ala Ser Gly Asn Leu Val Pro Leu Glu
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 Asp Val His Ile Lys Gly Arg Ile Ile Asp Thr Val Ala Gln Val Ile
 625 630 635 640
 Val Phe Gln Thr Tyr Thr Asn Lys Ser His Val Pro Ile Glu Ala Lys
 645 650 655
 Tyr Ile Phe Pro Leu Asp Asp Lys Ala Ala Val Cys Gly Phe Glu Ala
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 Phe Ile Asn Gly Lys His Ile Val Gly Glu Ile Lys Glu Lys Glu Glu
 675 680 685
 Ala Gln Gln Glu Tyr Leu Glu Ala Val Thr Gln Gly His Gly Ala Tyr
 690 695 700
 Leu Met Ser Gln Asp Ala Pro Asp Val Phe Thr Val Ser Val Gly Asn
 705 710 715 720
 Leu Pro Pro Lys Ala Lys Val Leu Ile Lys Ile Thr Tyr Ile Thr Glu
 725 730 735
 Leu Ser Ile Leu Gly Thr Val Gly Val Phe Phe Met Pro Ala Thr Val
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 Ala Pro Trp Gln Gln Asp Lys Ala Leu Asn Glu Asn Leu Gln Asp Thr
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 Val Glu Lys Ile Cys Ile Lys Glu Ile Gly Thr Lys Gln Ser Phe Ser

770	775	780
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Asp Thr His Glu Leu Lys Gln Lys Arg Thr Asp Cys Lys Ala Val Ile 805 810 815		
Ser Thr Met Glu Gly Ser Ser Leu Asp Ser Ser Gly Phe Ser Leu His 820 825 830		
Ile Gly Leu Ser Ala Ala Tyr Leu Pro Arg Met Trp Val Glu Lys His 835 840 845		
Pro Glu Lys Glu Ser Glu Ala Cys Met Leu Val Phe Gln Pro Asp Leu 850 855 860		
Asp Val Asp Leu Pro Asp Leu Ala Ser Glu Ser Glu Val Ile Ile Cys 865 870 875 880		
Leu Asp Cys Ser Ser Ser Met Glu Gly Val Thr Phe Leu Gln Ala Lys 885 890 895		
Gln Ile Ala Leu His Ala Leu Ser Leu Val Gly Glu Lys Gln Lys Val 900 905 910		
Asn Ile Ile Gln Phe Gly Thr Gly Tyr Lys Glu Leu Phe Ser Tyr Pro 915 920 925		
Lys His Ile Thr Ser Asn Thr Ala Ala Ala Glu Phe Ile Met Ser Ala 930 935 940		
Thr Pro Thr Met Gly Asn Thr Asp Phe Trp Lys Thr Leu Arg Tyr Leu 945 950 955 960		
Ser Leu Leu Tyr Pro Ala Arg Gly Ser Arg Asn Ile Leu Leu Val Ser 965 970 975		
Asp Gly His Leu Gln Asp Glu Ser Leu Thr Leu Gln Leu Val Lys Arg 980 985 990		
Ser Arg Pro His Thr Arg Leu Phe Ala Cys Gly Ile Gly Ser Thr Ala 995 1000 1005		
Asn Arg His Val Leu Arg Ile Leu Ser Gln Cys Gly Ala Gly Val Phe 1010 1015 1020		
Glu Tyr Phe Asn Ala Lys Ser Lys His Ser Trp Arg Lys Gln Ile Glu 1025 1030 1035 1040		
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Lys Trp Gln Gln Leu Asn Pro Asp Ala Pro Glu Ala Leu Gln Ala Pro 1060 1065 1070		
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Lys Glu Phe Cys Thr Met Val Ser Thr Thr Glu Leu Gln Lys Thr Thr
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 Gly Thr Met Ile His Lys Leu Ala Ala Arg Ala Leu Ile Arg Asp Tyr
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 Glu Asp Gly Ile Leu His Glu Asn Glu Thr Ser His Glu Met Lys Lys
 1140 1145 1150
 Gln Thr Leu Lys Ser Leu Ile Ile Lys Leu Ser Lys Glu Asn Ser Leu
 1155 1160 1165
 Ile Thr Gln Phe Thr Ser Phe Val Ala Val Glu Lys Arg Asp Glu Asn
 1170 1175 1180
 Glu Ser Pro Phe Pro Asp Ile Pro Lys Val Ser Glu Leu Ile Ala Lys
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 Glu Asp Val Asp Phe Leu Pro Tyr Met Ser Trp Gln Gly Glu Pro Gln
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 Glu Ala Val Arg Asn Gln Ser Leu Leu Ala Ser Ser Glu Trp Pro Glu
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 Leu Arg Leu Ser Lys Arg Lys His Arg Lys Ile Pro Phe Ser Lys Arg
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 Lys Met Glu Leu Ser Gln Pro Glu Val Ser Glu Asp Phe Glu Glu Asp
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 Gly Leu Gly Val Leu Pro Ala Phe Thr Ser Asn Leu Glu Arg Gly Gly
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 Val Glu Lys Leu Leu Asp Leu Ser Trp Thr Glu Ser Cys Lys Pro Thr
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 Val Lys Gly Arg Glu Cys Leu Leu Asp Leu Ile Ala Thr Met Leu Val
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 <213> Artificial Sequence
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<223> Description of Artificial Sequence: primer for the
human ADPRTL1 gene

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<210> 4
<211> 22
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer for the
human ADPRTL1 gene

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<210> 5
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<223> Description of Artificial Sequence: primer for
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actgaagcac tacgggcctg 20

<210> 6
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<210> 7
<212> DNA
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<223> Description of Artificial Sequence: primer for the
ribosomal protein S9 gene

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<223> Description of Artificial Sequence: primer for the
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<210> 9
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<223> Description of Artificial Sequence: primer for
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<210> 10
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<223> Description of Artificial Sequence: primer for the
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<400> 10
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<210> 11
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<210> 12
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer for the
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<400> 12
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<210> 13
<211> 21

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer for the
transferrin receptor (TRR) gene

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<210> 14

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer for the
transferrin receptor (TRR) gene

<400> 14

agcagttggc tggtgtacct ctc

23